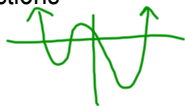


## 7-2 Graphing Polynomial Functions

$$f(x) = x^4 + x^3 - 4x^2 - 4x$$



Roots  $\{-2, -1, 0, 2\}$

Relative max  $\{.941\}$

Relative min  $\{-1.383, -6.914\}$

Ex

$$f(x) = -x^3 - 4x + 5$$

Roots  $\{1\}$

Relative max  $\text{---}$

Relative min  $\text{---}$

Ex

$$f(x) = x^4 - x^3 - 4x^2 + 1$$

Roots  $\{-1.441, -0.567, +.485, 2.523\}$

Relative max  $\{1\}$

Relative min  $\{-1.046, -7.310\}$

Degree  $n$ 

Turning points at most  $n - 1$

Real World Models

p359

**HW**

p356-358

15-21odd

27-30

36-38